

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) A dense mortar which comprises:

(i) an ettringite binder comprising both calcium sulphates sulphate and a calcium aluminates aluminate mineral compound, the calcium aluminates aluminate mineral compound comprising oxides of calcium C and of aluminium A, which are soluble and combined in one or several crystallized and/or amorphous mineralogical phases in such proportions that:

- the useful C/A molar ratio of the calcium aluminates mineral compound is in the range of 1.2 to 2.7;

- the sum in weight of the useful ~~(C+A)~~ C+A phases represents at least 30% of the total weight of the mineral compound,

(ii) at least one poly(alkylene oxide) comb polymer ~~(PCP)~~ and,

(iii) at least one ~~structuring~~ organic resin, ~~characterised in that~~ wherein the mortar contains less than 2% by weight of said ~~structuring~~ organic resin.

2. (currently amended) A The dense mortar according to claim 1, ~~characterised in that~~ it wherein the mortar comprises at least 0.3% by weight of ~~structuring~~ organic resin, based on the

weight of the mortar.

3. (currently amended) ~~A~~ The dense mortar according to claim 1, ~~characterised in that~~ wherein the mortar comprises 0.05% to 0.3% of poly(alkylene oxide) comb polymer (PCP), preferably, 0.1% to 0.2% of poly(alkylene oxide) comb polymer (PCP), based on the weight of the mortar.

4. (currently amended) ~~A~~ The dense mortar according to claim 1, ~~characterised in that~~ wherein said ~~structuring~~ organic resin account for 1% by weight of the mortar, or less.

5. (currently amended) ~~A~~ The dense mortar according to claim 1, ~~characterised in that~~ wherein the poly(alkylene oxide) comb polymer (PCP) is chosen selected from among the group consisting of the copolymers of carboxylic acids and carboxylic esters of poly(alkylene glycol), copolymers of carboxylic acids and poly(alkylene glycol) amide, copolymers of carboxylic acids and poly(alkylene glycol) imide, copolymers of carboxylic acids and vinylic ethers of poly(alkylene glycol), ~~either neutralised or not neutralised,~~ and mixtures of thereof.

6. (currently amended) ~~A~~ The dense mortar according to claim 1 ~~characterised in that~~ wherein the ~~structuring~~ organic resin comprises at least one polymer selected from among the

group consisting of poly(vinyl acetate), powdered copolymers of vinyl and ethylene acetate ~~(EVA)~~, copolymers formed by copolymerisation of 2 or more monomers selected from among the group consisting of ethylene, vinyl acetate, vinyl esters of versatic acids, vinyl chloride, vinyl laurate, styrene, butadiene, alkyl acrylate, alkyl methacrylate, maleic anhydride and its derivatives.

7. (currently amended) ~~A~~ The dense mortar according to claim 6 ~~characterised in that it~~ wherein the mortar comprises 0.2% by weight of the mortar, of at least one poly(alkylene oxide) comb polymer ~~(PCP)~~, and 1% by weight of the mortar of at least one powdered copolymer of vinyl and ethylene acetate ~~(EVA)~~.

8. (currently amended) ~~A~~ The A dense mortar according to claim 1, ~~characterised in that~~ wherein the ~~structuring~~ organic resin comprises at least one polyvinyl alcohol ~~(PVA)~~, possibly ~~altered by the inclusion of carboxylic acid groups in its structure~~.

9. (currently amended) ~~A~~ The dense mortar according to claim 8 ~~characterised in that it~~ wherein the mortar comprises 0.2% by weight of the mortar, of at least one poly(alkylene oxide) comb polymer ~~(PCP)~~, and 1% by weight of the mortar of at least one polyvinyl alcohol ~~(PVA)~~.

10. (currently amended) A The dense mortar according to claim 1 ~~characterised in that~~ wherein the weight ratio of calcium ~~aluminates~~ aluminate mineral compound /calcium sulphate within the ettringite binder is ~~comprised~~ between 0.5 and 4, and ~~preferably between 1.5 and 3.~~

11. (currently amended) A The dense mortar according to claim 1 ~~characterised in that~~ wherein the molar ratio of calcium sulphate/aluminium oxide A in the ettringite binder is ~~comprised~~ between 0.5 and 2.

12. (previously presented) A The dense mortar according to claim 1 ~~characterised in that~~ wherein the useful C/A molar ratio of ~~useful~~ the calcium aluminate mineral compound ~~calcium aluminates/calcium sulphate~~ within the ettringite binder is ~~comprised~~ between 1.3 and 2.5, and ~~preferably between 1.6 and 2.~~

13. (currently amended) A The dense mortar according to claim 1 ~~characterised in that~~ wherein the useful C/A molar ratio of the calcium aluminates mineral compound sulphate/aluminium oxide A in the ettringite binder is ~~comprised~~ between 0.6 and 1.8, and ~~preferably between 0.8 and 1.7.~~

14. (currently amended) A The dense mortar according to claim 1 ~~characterised in that it~~ wherein the mortar exhibits

at the time of mixing with water a water/solids weight ratio lower than 0.5.

15. (currently amended) ~~A~~ The dense mortar according to claim 1, ~~characterised in that~~ wherein the mortar does not ~~comprises~~ comprise any Portland cement or hydraulic lime, or ~~comprises~~ Portland cement and/or hydraulic lime at a content of less than 3.5% by weight based on the total weight of dry mortar.

16. (currently amended) ~~A~~ The dense mortar according to claim 1, ~~characterised in that~~ wherein the sum in weight of useful (C+A) C+A phases accounts for at least 50% by weight of the total weight of the calcium aluminates mineral compound.

17. (currently amended) ~~A~~ The dense mortar according to claim 1, ~~characterised in that~~ wherein the calcium aluminates aluminate mineral compound is obtained through baking in a furnace at a temperature of over 1100°C, in the form of one or several melted or sintered clinkers that ~~may~~ contain crystallised phases or amorphous phases.

18. (currently amended) ~~A~~ The dense mortar according to claim 1, ~~characterised in that~~ wherein the calcium aluminates aluminate mineral compound is under the form of a crystallised mineralogical phase selected from ~~among~~ the group consisting of

CA, C12A7, C3A, C4A3\$<sub>L</sub> or under the form of an amorphous phase<sub>L</sub> or under the form of a mixture of at least one of said crystallised mineralogical phases and an amorphous phase.

19. (currently amended) A The dense mortar according to the claim 18 ~~characterised in that~~ wherein the calcium aluminates aluminate mineral compound contains at least 30% by weight of C12A7, ~~preferably at least 50% by weight of C12A7, more preferably from 50% to 85% by weight of C12A7~~ based on the total weight of the mineral compound.

20. (currently amended) A The dense mortar according to claim 1 ~~characterised in that~~ wherein the calcium aluminates aluminate mineral compound contains at least one crystallised mineralogical phase selected from among the group consisting of C2A(1-x)Fx, C2S, C2AS, C3S<sub>L</sub> and mixtures thereof, where x is an integer ~~belonging to ]0; 1]~~ from 0 to 1.

21. (currently amended) A The dense mortar according to claim 1 ~~characterised in that~~ wherein the calcium aluminates aluminate mineral compound is ground and exhibits a Blaine surface area greater than or equal to 1500 cm<sup>2</sup>/g.

22. (currently amended) A The dense mortar according to the claim 21 ~~characterised in that~~ wherein the calcium

aluminates aluminate mineral compound is ground to a Blaine surface area comprised between 2000 cm<sup>2</sup>/g and 5000 cm<sup>2</sup>/g.

23. (currently amended) A The dense mortar according to claim 1, ~~characterised in that~~ wherein the calcium sulphate is derived from a compound selected from ~~among~~ the group consisting of anhydrites, ~~semi-hydrates~~ hemihydrates, gypsum and mixtures thereof.

24. (currently amended) A The dense mortar according to claim 1, ~~characterised in that it comprises furthermore~~ further comprising:

- chalk fillers or siliceous sands: from 25 to 85% by weight based on the total weight of the dry mortar,

- lime and/or Portland cement: from 0% to 3.5% by weight based on the total weight of the dry mortar, and

- ~~complementary~~ rheological additives and/or setting regulating additives.

25. (currently amended) A The dense mortar according to claim 24, ~~characterised in that it contains~~ wherein the mortar comprises:

- chalk fillers or siliceous sands: from 50 to 80% by weight based on the total weight of the dry mortar,

- lime and/or Portland cement: from 0% to 0.5% by weight based on the total weight of the dry mortar, and

- ~~complementary~~ rheological additives and/or setting

regulating additives.

26. (currently amended) ~~A~~ The dense mortar according to claim 24 ~~characterised in that~~ wherein the rheological additives account for from 0.1% to 0.5% of the total weight of the dry mortar, and the setting regulating additives account for 0.1% to 0.5% of the total weight of the dry mortar.

27. (currently amended) ~~A~~ The dense mortar according to any claim 1 ~~characterised in that it~~ wherein the mortar is obtained by mixing with water in a quantity such that the water/solid weight ratio is less than 0.5.

28. (Canceled)

29. (new) The dense mortar according to claim 8 wherein the polyvinyl alcohol is altered by the inclusion of carboxylic acid groups in its structure.

30. (new) The dense mortar according to claim 1, further comprising Portland cement and/or hydraulic lime at a content of less than 3.5% by weight based on the total weight of dry mortar.